REMARKS

Reconsideration and allowance of this application are respectfully requested. Claims 1-3 are pending in the application. Claim 3 has been amended to correct a clerical error. The rejections are respectfully submitted to be obviated in view of the remarks presented herein.

Rejection Under 35 U.S.C. § 103(a) - Chan in view of Wan et al.

Claims 1 and 3 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chan (U.S. Patent Number 5,107,332), in view of Wan et al. (U.S. Patent Number 5,452,112, hereinafter "Wan"). The rejection is respectfully traversed.

Regarding claim 1, Applicant's claimed invention relates to a shading correction method in heat development recording. Before the heat development recording apparatus is shipped, there is performed: (1) continuously outputting a continuous recording pattern to a recording surface, (2) measuring recording density of the continuous recording pattern by a recording density measuring unit, (3) generating a shading correction table for each pixel, and (4) registering the shading correction table in a storing unit. After the heat development recording apparatus is shipped without mounting the recording density measuring unit thereon, there is performed: (1) outputting a discrete recording pattern, (2) measuring recording density of the discrete recording pattern for each discrete recording position, (3) generating another shading correction table, and (4) updating the shading correction table registered in the storing unit.

Turning to the cited art, Chan discloses continuously correcting for errors in color output, such that the color output of a color printer is continuously matched with the color of an image read by a scanner which feeds the printer. A continuous comparison of input test pattern data

from a small color gamut having only a selected few number of pixels is made with an output test pattern data, to generate a color correction conversion factor. The color correction conversion factor is used to continuously update an initial full scale look up table which was initially prepared from a full scale color gamut (see Abstract). A complete color gamut is read by a densitometer, and a look up table is generated and stored into computer memory (column 4, lines 11-25). A simplified test pattern is scanned using a conventional scanner to generate RGB input test pattern data, which is processed through the look up table to generate corresponding CMYK output data as an output test pattern data. This output test pattern data is again scanned to generate RGB data which is compared with the RGB input test pattern data to generate a compensation matrix which is merged with a transformation matrix based on the relation of the RGB input test pattern data with the CMYK output data. This merging generates a new updated color look up table (see column 4, line 26 to column 5, line 31).

Examiner maintains that the combination of Chan and Wan teaches each feature of independent claim 1. As an initial matter, Chan and Wan relate to color gamut matching between a scanner input and a printer, for example. In that connection, the references do not address shade correction in particular, since color matching is dependent on several alternate conditions such as saturation and hue. Additionally, the color matching discussed in Chan and Wan are not provided per pixel. In color correction, inputs of color signals are mapped to a look up table, where the color signal for varying pixels may be mapped to the same value. The color matching differs from the shade correction as claimed. Moreover, Chan does not measure recording density of a discrete recording pattern output after the heat development recording

apparatus is shipped without mounting the recording density measuring unit thereon. Even if Chan's look up table is generated by continuously outputting a continuous recording pattern to a recording surface and measuring recording density of the continuous recording pattern by a recording density measuring unit, Chan does not measure the recording density of a discrete recording pattern. Chan only stores an initial look up table of a complete color gamut read by a densitometer (column 5, lines 22-31). There is no apparent mention in Chan of generating another shading correction table from measured recording density of a discrete recording pattern, and updating the initial look up table. Chan processes the simplified test pattern, by using a scanner to scan an RGB image, process this first RGB data through correlation with the initial look up table to generate CMYK data, output the CMYK data to be scanned again to RGB, the result of which is compared with the first RGB data, generating a compensation matrix. The compensation matrix is merged with the RGB to CMYK conversion factor to generate a new updated color look up table. As described in column 4, line 26 to column 5, line 31, upon which the Examiner relies for teaching Applicant's invention, Chan processes color data by correlating the RGB data with the initial full scale look up table, and does not measure a recording density of a discrete recording pattern.

Wan does nothing to remedy the deficiencies of Chan. Wan teaches only that a digital imaging system can be set up to perform satisfactorily in the factory, but periodic calibration may be necessary to be performed in the field. Wan does not perform shading correction by generating a shading correction table, nor does Wan disclose measuring recording density of a discrete recording pattern. At least by virtue of the aforementioned differences, the invention

defined by Applicant's claim 1 is patentable over Chan in view of Wan. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are respectfully requested.

Regarding claim 3, Applicant's heat development recording apparatus comprises a control unit generating a shading correction table based on measured results of recording densities of a shading correction pattern and corrects densities upon heat development. A connecting unit inputs measured results of recording densities from a first recording density measuring unit measuring a recording density for each pixel of a first shading correction pattern which is continuously recorded on a recording surface, and a second recording density measuring unit measuring a recording density at each discrete recording position of a second shading correction pattern which is discretely recorded on the recording surface.

Chan in view of Wan does not disclose at least "a second recording density measuring unit for measuring a recording density at each discrete recording position of a second shading correction pattern which is discretely recorded on the recording surface," as claimed. Neither Chan nor Wan teaches or suggests measuring recording density of a discretely recorded shading correction pattern, as discussed above. At least by virtue of the aforementioned differences, the invention defined by Applicant's claim 3 is patentable over Chan in view of Wan. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are respectfully requested.

Rejection Under 35 U.S.C. § 103(a) - Chan in view of Wan et al. and further in view of Sasanuma et al.

Claim 2 has been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chan in view of Wan and further in view of Sasanuma et al. (U.S. Patent Number 5,859,933, "Sasanuma"). The rejection is respectfully traversed.

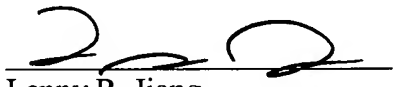
Chan in view of Wan does not disclose measuring recording density of a discrete recording pattern output after the heat development recording apparatus is shipped without mounting the recording density measuring unit thereon. Sasanuma does not remedy this deficiency of Chan and Wan.

Sasanuma discloses setting a look up table based on image density of an output gradation test pattern. However, there is also no teaching or suggestion in Sasanuma of, after a heat development recording apparatus is shipped without mounting the recording density measuring unit thereon, of "outputting a discrete recording pattern measuring recording density of the discrete recording pattern for each discrete recording position, generating another shading correction table, and updating the shading correction table registered in the storing unit," as claimed. At least by virtue of the aforementioned differences, the invention defined by Applicant's claim 2 is patentable over Chan in view of Wan and further in view of Sasanuma. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) are respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Lenny R. Jiang
Registration No. 52,432

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: December 10, 2004